

# INTERNATIONAL SEARCH REPORT

national Application No

T/GB2004/002988

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 G01S17/95 G01S17/58

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G01S G01P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, INSPEC, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 735 503 A (BACHSTEIN FELIX ET AL) 5 April 1988 (1988-04-05) column 1 column 3 - column 4 column 8, line 39 - line 40; figures 1,2a,2b,6	1-4, 19, 21
X	US 5 796 471 A (MCKAY JACK A ET AL) 18 August 1998 (1998-08-18) column 5, line 30 - column 7, line 3	1, 19
A	US 5 872 535 A (JORDAN JAMES R ET AL) 16 February 1999 (1999-02-16) column 3, line 67 - column 6, line 6; figures	5-12, 17-22
	----- -/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents:

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the International filing date

\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*&\* document member of the same patent family

Date of the actual completion of the international search

23 September 2004

Date of mailing of the international search report

30/09/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Devine, J

# INTERNATIONAL SEARCH REPORT

national Application No  
T/GB2004/002988

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2002/109630 A1 (LAW DANIEL C) 15 August 2002 (2002-08-15) column 1 - column 2 -----	5-12, 18-22
A	US 3 728 748 A (ROEHLER F) 24 April 1973 (1973-04-24) the whole document -----	1-22

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International Application No

. /GB2004/002988

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
US 4735503	A	05-04-1988	DE	3520214 C1		10-07-1986
			EP	0204295 A2		10-12-1986
US 5796471	A	18-08-1998	US	5872621 A		16-02-1999
US 5872535	A	16-02-1999	NONE			
US 2002109630	A1	15-08-2002	NONE			
US 3728748	A	24-04-1973	NONE			

**Box No. VIII (iv) DECLARATION: INVENTORSHIP (only for the purposes of the designation of the United States of America)**

*The declaration must conform to the following standardized wording provided for in Section 214; see Notes to Boxes Nos. VIII, VIII (i) to (v) (in general) and the specific Notes to Box No. VIII (iv). If this Box is not used, this sheet should not be included in the request.*

**Declaration of inventorship (Rules 4.17(iv) and 51bis.1(a)(iv))  
for the purposes of the designation of the United States of America:**

I hereby declare that I believe I am the original, first and sole (if only one inventor is listed below) or joint (if more than one inventor is listed below) inventor of the subject matter which is claimed and for which a patent is sought.

This declaration is directed to the international application of which it forms a part (if filing declaration with application).

This declaration is directed to international application No. PCT/..... (if furnishing declaration pursuant to Rule 26ter).

I hereby declare that my residence, mailing address, and citizenship are as stated next to my name.

I hereby state that I have reviewed and understand the contents of the above-identified international application, including the claims of said application. I have identified in the request of said application, in compliance with PCT Rule 4.10, any claim to foreign priority, and I have identified below, under the heading "Prior Applications," by application number, country or Member of the World Trade Organization, day, month and year of filing, any application for a patent or inventor's certificate filed in a country other than the United States of America, including any PCT international application designating at least one country other than the United States of America, having a filing date before that of the application on which foreign priority is claimed.

Prior Applications: GB.0316241.9 Filed 11-Jul-2003 .....

Our Ref: IP/P7251 .....

I hereby acknowledge the duty to disclose information that is known by me to be material to patentability as defined by 37 C.F.R. § 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the PCT international filing date of the continuation-in-part application.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Name: David Arthur SMITH .....

Residence: United Kingdom .....

(city and either US state, if applicable, or country)

Mailing Address: QinetiQ Limited, Malvern Technology Centre, Bldg A, Room 709, St Andrews Road, .....

Malvern, Worcestershire WR14 3PS .....

Citizenship: British .....

Inventor's Signature: .....  
(if not contained in the request, or if declaration is corrected or added under Rule 26ter after the filing of the international application. The signature must be that of the inventor, not that of the agent)

Date: .....  
(of signature which is not contained in the request, or of the declaration that is corrected or added under Rule 26ter after the filing of the international application)

Name: Michael HARRIS .....

Residence: United Kingdom .....

(city and either US state, if applicable, or country)

Mailing Address: QinetiQ Limited, Malvern Technology Centre, Bldg P, Room D313, St Andrews Road, .....

Malvern, Worcestershire WR14 3PS .....

Citizenship: British .....

Inventor's Signature: .....  
(if not contained in the request, or if declaration is corrected or added under Rule 26ter after the filing of the international application. The signature must be that of the inventor, not that of the agent)

Date: .....  
(of signature which is not contained in the request, or of the declaration that is corrected or added under Rule 26ter after the filing of the international application)

☐ This declaration is continued on the following sheet, "Continuation of Box No. VIII (iv)".